

WHAT IS CLAIMED IS:

1. An information processing system, comprising:
a data store configured to store data;
a persistence layer configured to communicate with the data store;
a domain layer, the domain layer including at least one domain object, each of the domain objects configured to communicate with the data store via the persistence layer and to store data retrieved from the data store; and
a business object layer, the business object layer including at least one business object, each business object configured to communicate with at least one of the domain objects and to retrieve data therefrom.
2. The information processing system according to claim 1, wherein the persistence layer includes at least one access object configured to retrieve data from the data store and at least one maintenance object adapted to store data in the data store.
3. The information processing system according to claim 1, further comprising a user interface layer, the user interface layer including at least one user interface configured to provide an interface for a human user to interact with the information processing system.
4. The information processing system according to claim 3, further comprising an adapter layer, the user interface layer configured to communicate with the business object layer via the adapter layer.
5. The information processing system according to claim 1, wherein the domain objects are configured to perform at least one of data validation, computation to calculate derived information and data manipulation.
6. The information processing system according to claim 1, wherein the domain layer includes a messaging mechanism.

7. The information processing system according to claim 6, further comprising a messaging queue, the messaging mechanism posting a message to the message queue.

8. The information processing system according to claim 1, further comprising a controller layer, the controller layer configured to control communication between the data store and the domain layer and between the business-object layer and the domain layer.

9. The information processing system according to claim 1, wherein the information processing system comprises a plurality of business objects defining a business object hierarchy.

10. The information processing system according to claim 1, wherein the data stored in each of the domain objects is unique to the respective domain object.

11. The information processing system according to claim 1, wherein the data stored in each of the domain objects is a subset of the data stored in the data store.

12. The information processing system according to claim 1, wherein the data stored in each business object is refreshed in response to a change of data stored in the domain objects.

13. The information processing system according to claim 1, wherein the business objects are configured to retrieve data from the data store solely via the domain objects.

14. The information processing system according to claim 1, wherein the domain layer is configured to provide a transaction mechanism for integrating data in the data store.

15. The information processing system according to claim 1, wherein the persistence layer is configured to manage creation of the domain objects from data

stored in the data store and to update the data store with data stored in the domain objects.

16. The information processing system according to claim 1, wherein the business objects are further configured to communicate with the data store and to retrieve data therefrom.

17. The information processing system according to claim 1, further comprising at least one view object, the business objects being further configured to communicate with the at least one view object and to retrieve data therefrom.

18. An information processing system, comprising method for processing data stored in a data store, the method comprising the steps of:

- (a) retrieving at least a portion of the data from the data store via a persistence layer;
- (b) storing the data retrieved in the retrieving step (a) in at least one domain object;
- (c) retrieving at least a portion of the data stored in the domain object;
- (d) storing the data retrieved in the retrieving step (c) in at least one business object; and
- (e) processing the data stored in the business object.

19. The information processing system according to claim 18, wherein the method further comprises the step of providing at least one user interface allowing human user interaction.

20. The information processing system according to claim 18, wherein the method further comprises at least one of the substeps of validating the data stored in the domain objects, calculating derived information from data stored in the domain objects and manipulating data stored in the domain objects.

21. The information processing system according to claim 18, wherein the method further comprises the step of posting a message from the domain object to a message queue.

22. The information processing system according to claim 18, wherein the method further comprises the step of anticipating a future retrieval of data to be retrieved in the retrieving step (a).

23. The information processing system according to claim 22, wherein the method further comprises the step of pre-fetching the anticipated data.

24. The information processing system according to claim 18, wherein the method further comprises the step of defining a hierarchy of a plurality of business objects.

25. The information processing system according to claim 18, wherein the storing step (b) comprises the step of storing unique data to each domain object.

26. The information processing system according to claim 18, wherein the data stored in the storing step (b) is a subset of the data stored in the data store.

27. The information processing system according to claim 18, wherein the method further comprises the step of refreshing the data stored in the business object in response to a change in the data stored in the domain objects.

28. A method for processing data stored in a data store, the method comprising the steps of:

- (a) retrieving at least a portion of the data from the data store via a persistence layer;
- (b) storing the data retrieved in the retrieving step (a) in at least one domain object;
- (c) retrieving at least a portion of the data stored in the domain object;
- (d) storing the data retrieved in the retrieving step (c) in at least one business object; and
- (e) processing the data stored in the business object.

29. The method according to claim 28, further comprising the step of providing at least one user interface allowing human user interaction.

30. The method according to claim 28, further comprising at least one of the substeps of validating the data stored in the domain objects, calculating derived information from data stored in the domain objects and manipulating data stored in the domain objects.

31. The method according to claim 28, further comprising the step of posting a message from the domain object to a message queue.

32. The method according to claim 28, further comprising the step of anticipating a future retrieval of data to be retrieved in the retrieving step (a).

33. The method according to claim 32, further comprising the step of pre-fetching the anticipated data.

34. The method according to claim 28, further comprising the step of defining a hierarchy of a plurality of business objects.

35. The method according to claim 28, wherein the storing step (b) comprises the step of storing unique data to each domain object.

36. The method according to claim 28, wherein the data stored in the storing step (b) is a subset of the data stored in the data store.

37. The method according to claim 28, further comprising the step of refreshing the data stored in the business object in response to a change in the data stored in the domain objects.

38. A computer-readable storing medium storing a set of instructions, the set of instructions capable of being executed by a processor arrangement to implement a method for processing data stored in a data store, the method comprising the steps of:

(a) retrieving at least a portion of the data from the data store via a persistence layer;

- (b) storing the data retrieved in the retrieving step (a) in at least one domain object;
- (c) retrieving at least a portion of the data stored in the domain object;
- (d) storing the data retrieved in the retrieving step (c) in at least one business object; and
- (e) processing the data stored in the business object.

39. The computer-readable storing medium according to claim 38, wherein the method further comprises the step of providing at least one user interface allowing human user interaction.

40. The computer-readable storing medium according to claim 38, wherein the method further comprises at least one of the substeps of validating the data stored in the domain objects, calculating derived information from data stored in the domain objects and manipulating data stored in the domain objects.

41. The computer-readable storing medium according to claim 38, wherein the method further comprises the step of posting a message from the domain object to a message queue.

42. The computer-readable storing medium according to claim 38, wherein the method further comprises the step of anticipating a future retrieval of data to be retrieved in the retrieving step (a).

43. The computer-readable storing medium according to claim 42, wherein the method further comprises the step of pre-fetching the anticipated data.

44. The computer-readable storing medium according to claim 38, wherein the method further comprises the step of defining a hierarchy of a plurality of business objects.

45. The computer-readable storing medium according to claim 38, wherein the storing step (b) comprises the step of storing unique data to each domain object.

46. The computer-readable storing medium according to claim 38, wherein the data stored in the storing step (b) is a subset of the data stored in the data store.

47. The computer-readable storing medium according to claim 38, wherein the method further comprises the step of refreshing the data stored in the business object in response to a change in the data stored in the domain objects.